R307. Environmental Quality, Air Quality.

R307-328. Ozone Nonattainment and Maintenance Areas and Utah and Weber Counties: Gasoline Transfer and Storage.

R307-328-1. Purpose.

The purpose of R307-328 is to establish Reasonably Available Control Technology (RACT) for control of gasoline vapors during the filling of gasoline transport vehicles and storage tanks in ozone nonattainment and maintenance areas and Utah and Weber Counties. The rule is based on federal control technique guidance documents. This requirement is commonly referred to as stage I vapor recovery.

R307-328-2. Applicability.

(1) Transport Vehicles. R307-328 applies to the owner or operator of any gasoline tank truck, railroad tank car, or other gasoline transport vehicle that loads or unloads gasoline in Utah or Weber County or any ozone nonattainment or maintenance area.

(2) Gasoline Dispensing. R307-328 applies to the owner or operator of any bulk terminal, bulk plant, or service station located in Utah or Weber County or any ozone nonattainment or maintenance area.

R307-328-3. Definitions.

The following additional definitions apply to R307-328.

"Bottom Filling" means the filling of a tank through an inlet at or near the bottom of the tank designed to have the opening covered by the liquid after the pipe normally used to withdraw liquid can no longer withdraw any liquid.

"Qualified contractor" means a contractor who has been qualified by the executive secretary in accordance with R307-342 to perform vapor tightness tests on gasoline transport vehicles.

"Submerged Fill Pipe" means any fill pipe with a discharge opening which is entirely submerged when the liquid level is 6 inches above the bottom of the tank and the pipe normally used to withdraw liquid from the tank can no longer withdraw any liquid.

R307-328-4. Loading of Tank Trucks, Trailers, Railroad Tank Cars, and Other Transport Vehicles.

(1) No person shall load or permit the loading of gasoline into any tank truck, trailer, railroad tank car, or other transport vehicle unless the emissions from such vehicle are controlled by use of a vapor collection and control system and submerged or bottom filling. RACT shall be required and in no case shall vapor emissions to the atmosphere exceed 0.640 pounds per 1,000 gallons transferred.

(2) Such vapor collection and control system shall be properly installed and maintained.

(3) The loading device shall not leak.

(4) The loading device shall utilize the dry-break loading design couplings and shall be maintained and operated to allow no more than an average of 15 cc drainage per disconnect for 5 consecutive disconnects.

(5) All loading and vapor lines shall be equipped with

fittings which make a vapor tight connection and shall automatically close upon disconnection to prevent release of the organic material.

(6) A gasoline storage and transfer installation that receives inbound loads and dispatches outbound loads ("bulk plant") need not comply with R307-328-4 if it does not have a daily average throughput of more than 3,900 gallons (15,000 or more liters) of gasoline based upon a 30-day rolling average. Such installations shall on-load and off-load gasoline by use of bottom or submerged filling or alternate equivalent methods. The emission limitation is based on operating procedures and equipment specifications using Reasonably Available Control Technology as defined in EPA documents EPA 450/2-77-026 October 1977, "Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals," and EPA-450/2-77-035 December 1977, "Control of Volatile Organic Emissions from Bulk Gasoline Plants." The design effectiveness of such equipment and the operating procedures must be documented and submitted to and approved by the executive secretary.

(7) Hatches of transport vehicles shall not be opened at any time during loading operations except to avoid emergency situations or during emergency situations. Pressure relief valves on storage tanks and transport vehicles shall be set to release at the highest possible pressure, in accordance with State or local fire codes and National Fire Prevention Association guidelines. Pressure in the vapor collection system shall not exceed the transport vehicle pressure relief setting.

(8) Each owner or operator of a gasoline storage and dispensing installation shall conduct testing of vapor collection systems used at such installation and shall maintain records of all tests for no less than two years. Testing procedures of vapor collection systems shall be approved by the executive secretary and shall be consistent with the procedures described in the EPA document, "Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems," EPA-450/2-78-051.

(9) Semi-annual testing shall be conducted and records maintained of such test. The frequency of tests may be altered by the executive secretary upon submittal of documentation which would justify a change.

(10) The vapor collection and vapor processing equipment shall be designed and operated to prevent gauge pressure in the delivery vessel from exceeding 18 inches of water and prevent vacuum from exceeding 6 inches of water. During testing and monitoring, there shall be no reading greater than or equal to 100 percent of the lower explosive limit measured at 1.04 inches around the perimeter of a potential leak source as detected by a combustible gas detector. Potential leak sources include, but are not limited to, piping, seals, hoses, connections, pressure or vacuum vents, and vapor hoods. In addition, no visible liquid leaks are permitted during testing or monitoring.

R307-328-5. Stationary Source Container Loading.

(1) No person shall transfer or permit the transfer of

gasoline from any delivery vessel (i.e. tank truck or trailer) into any stationary storage container with a capacity of 250 gallons or greater unless such container is equipped with a submerged fill pipe and at least 90 percent of the gasoline vapor, by weight, displaced during the filling of the stationary storage container is prevented from being released to the atmosphere. This requirement shall not apply to:

(a) the transfer of gasoline into any stationary storage container of less than 550 gallons used primarily for the fueling of implements of husbandry if such container is equipped with a permanent submerged fill pipe;

(b) the transfer of gasoline into any stationary storage container having a capacity of less than 2,000 gallons which was installed prior to January 1, 1979, if such container is equipped with a permanent submerged fill pipe;

(c) the transfer of gasoline to storage tanks equipped with floating roofs or their equivalent which have been approved by the executive secretary.

(2) The 90 percent performance standard of the vapor control system shall be based on operating procedures and equipment specifications. The design effectiveness of such equipment and the operating procedure must be documented and submitted to and approved by the executive secretary.

(3) Each owner or operator of a gasoline storage tank or the owner or operator of the gasoline delivery vessel subject to (1) above shall install vapor control equipment, which includes, but is not limited to:

(a) vapor return lines and connections sufficiently free of restrictions to allow transfer of vapor to the delivery vessel or to the vapor control system, and to achieve the required recovery;

(b) a means of assuring that the vapor return lines are connected to the delivery vessel, or vapor control system, and storage tank during tank filling;

(c) restrictions in the storage tank vent line designed and operated to prevent:

(i) the release of gasoline vapors to the atmosphere during normal operation; and

(ii) gauge pressure in the delivery vessel from exceeding 18 inches of water and vacuum from exceeding 6 inches of water.

R307-328-6. Transport Vehicles.

(1) Gasoline transport vehicles must be designed and maintained to be vapor tight during loading and unloading operations as well as during transport, except for normal pressure venting required under United States Department of Transportation Regulations.

(2) The design of the vapor recovery system shall be such that when the delivery tank is connected to an approved storage tank vapor recovery system or loading terminal, 90% vapor recovery efficiencies are realized. The connectors of the delivery tanks shall be compatible with the fittings on the fill pipes and vapor vents at the storage containers and gasoline loading terminals where the delivery tank will service or be serviced. Adapters may

be used to achieve compatibility.

(3) No person shall knowingly allow the introduction of gasoline into, dispensing of gasoline from, or transportation of gasoline in a gasoline transport vehicle without a current Utah Vapor Tightness Certificate.

(4) A vapor-laden transport vehicle may be refilled only at installations equipped to recover, process or dispose of vapors. Transport vehicles that only service locations with storage containers specifically exempted from the requirements of R307-328-5 need not be retrofitted to comply with R307-328-6(1)-(3) above, provided such transport vehicles are loaded through a submerged fill pipe or equivalent equipment provided the design and effectiveness of such equipment are documented and submitted to and approved by the executive secretary.

R307-328-7. Leak Tight Testing.

(1) Gasoline tank trucks and their vapor collection systems shall be tested for leakage by a qualified contractor using procedures approved by the executive secretary and consistent with the procedures described in R307-342.

(2) Gasoline tank trucks and their vapor collection systems shall be tested for leakage annually between December 1 and May 1.

(3) The tank shall not sustain a pressure change of more than 750 pascals (3 inches of H_2O) in five minutes when pressurized (by air or inert gas) to 4500 pascals (18 inches of H_2O) or evacuated to 1500 pascals (6 inches of H_2O).

(4) No visible liquid leaks are permitted during testing.

(5) Gasoline tank trucks shall be certified leak tight at least annually by a qualified contractor approved by the executive secretary.

(6) Each owner or operator of a gasoline tank truck shall have in his possession a valid vapor tightness certification, which:

(a) shows the date that the gasoline tank truck last passed the Utah vapor tightness certification test; and

(b) shows the identification number of the gasoline tank truck.

(7) Records of certification inspections, as well as any maintenance performed, shall be retained by the owner or operator of the tank truck for a two year period and be available for review by the executive secretary or the executive secretary's representative.

R307-328-8. Alternate Methods of Control.

(1) Any person may apply to the executive secretary for approval of an alternate test method, an alternate method of control, an alternate compliance period, an alternate emission limit, or an alternate monitoring schedule. The application must include a demonstration that the proposed alternate produces an equal or greater air quality benefit than that required by R307-328, or that the alternate test method is equivalent to that required by these rules. The executive secretary shall obtain concurrence from EPA when approving an alternate test method, an

alternate method of control, an alternate compliance period, an alternate emission limit, or an alternate monitoring schedule.

(2) Manufacturer's operational specifications, records, and testings of any control system shall use the applicable EPA Reference Methods of 40 CFR Part 60, the most recent EPA test methods, or EPA-approved state methods, to determine the efficiency of the control device. In addition, the owner or operator must meet the applicable requirements of record keeping for any control device. A record of all tests, monitoring, and inspections required by R307-328 shall be maintained by the owner or operator for a minimum of 2 years and shall be made available to the executive secretary or the executive secretary's representative upon request. Any malfunctioning control device shall be repaired within 15 calendar days after it is found by the owner or operator to be malfunctioning, unless otherwise approved by the executive secretary.

(3) For purposes of determining compliance with emission limits, volatile organic compounds and nitrogen oxides will be measured by the test methods identified in federal regulation or approved by the executive secretary. Where such a method also inadvertently measures compounds with negligible photochemical reactivity, an owner or operator may exclude these negligibly reactive compounds when determining compliance with an emissions standard.

R307-328-9. Compliance Schedule.

Sources located within any newly designated nonattainment area for ozone shall be in compliance with this rule within 180 days of the effective date of designation to nonattainment.

KEY: air pollution, gasoline transport, ozone
Date of Enactment or Last Substantive Amendment: January 16, 2007
Notice of Continuation: August 5, 2003
Authorizing, and Implemented or Interpreted Law: 19-2-101; 19-2-104(1)(a)